

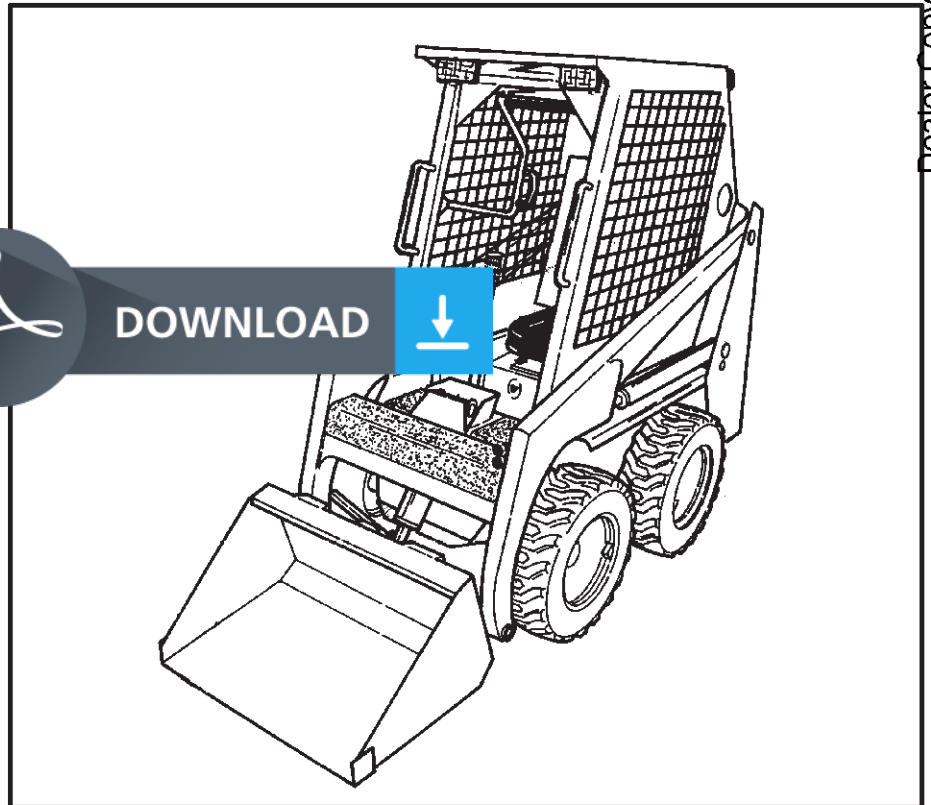
4  
5  
0



# Service Manual

(450-S/N 561711001 & Above)  
(453-S/N 561811001 & Above)

4  
5  
3



Dealer Copy -- Not for Resale

EQUIPPED WITH  
BOBCAT INTERLOCK  
CONTROL SYSTEM (BICSTM)

**MELROE  
INGERSOLL-RAND**

6724259 (1-96)

Printed in U.S.A.



© Melroe Company 1996



# MAINTENANCE SAFETY



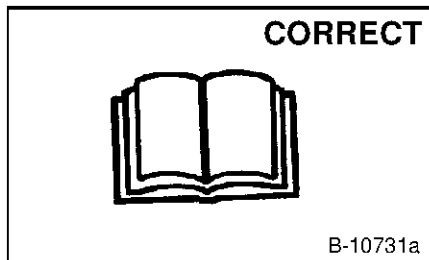
## WARNING

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

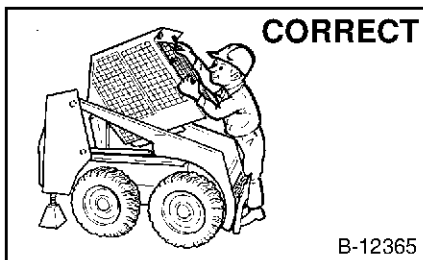
W-2003-0903



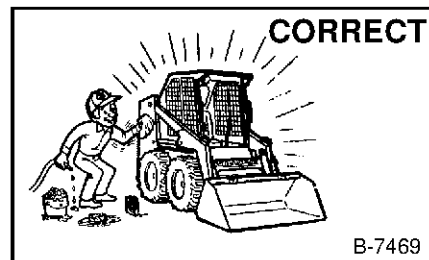
**Safety Alert Symbol:** This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.



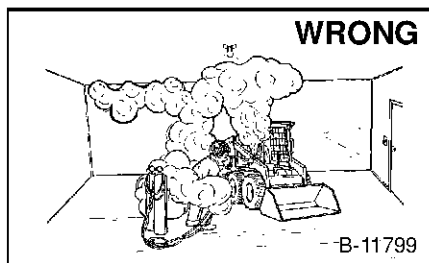
Never service the Bobcat Skid-Steer Loader without instructions.



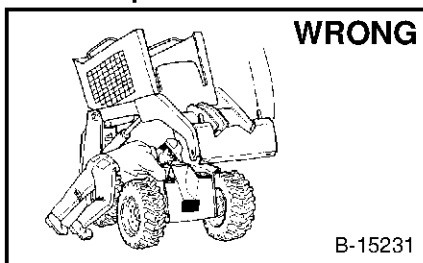
Use the correct procedure to lift or lower operator cab.



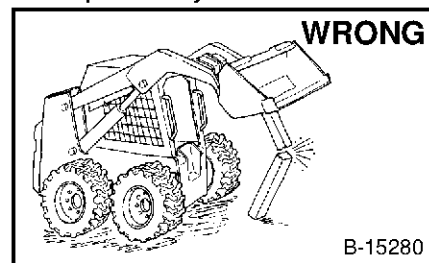
Cleaning and maintenance are required daily.



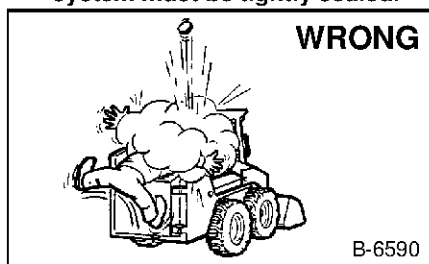
- Have good ventilation when welding or grinding painted parts.
- Wear dust mask when grinding painted parts. Toxic dust and gas can be produced.
- Avoid exhaust fume leaks which can kill without warning. Exhaust system must be tightly sealed.



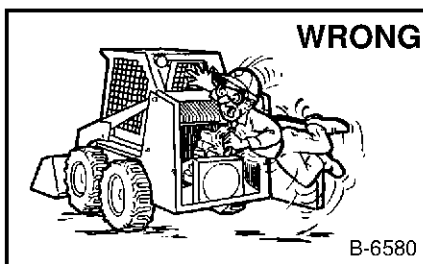
Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop. Do not go under lift arms when raised unless supported by an approved lift arm support device. Replace it if damaged.



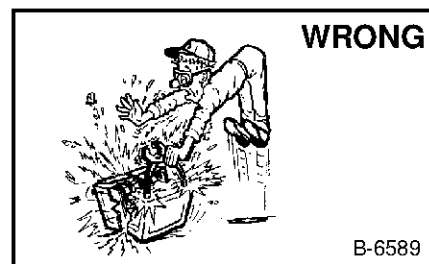
- Never work on loader with lift arms up unless lift arms are held by an approved lift arm support device. Replace if damaged.
- Never modify equipment or add attachments not approved by Bobcat Company.



- Stop, cool and clean engine of flammable materials before checking fluids.
- Never service or adjust loader with the engine running unless instructed to do so in the manual.
- Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate the skin or eyes.
- Never fill fuel tank with engine running, while smoking or when near open flame.



- Keep body, jewelry and clothing away from moving parts, electrical contact, hot parts and exhaust.
- Wear eye protection to guard from battery acid, compressed springs, fluids under pressure and flying debris when engines are running or tools are used. Use eye protection approved for type of welding.
- Keep rear door closed except for service. Close and latch door before operating the loader.



- Lead-acid batteries produce flammable and explosive gases.
- Keep arcs, sparks, flames and lighted tobacco away from batteries.
- Batteries contain acid which burns eyes or skin on contact. Wear protective clothing. If acid contacts body, flush well with water. For eye contact flush well and get immediate medical attention.

Maintenance procedures which are given in the Operation & Maintenance Manual can be performed by the owner/operator without any specific technical training. Maintenance procedures which are **not** in the Operation & Maintenance Manual must be performed **ONLY BY QUALIFIED BOBCAT SERVICE PERSONNEL**. Always use genuine Bobcat replacement parts. The Service Safety Training Course is available from your Bobcat dealer.

MSW01-0805

Dealer Copy -- Not for Resale



**Bobcat®**

## ALPHABETICAL INDEX

AIR CLEANER SERVICE .....	1-1	OIL COOLER AND SHROUDING .....	7B-1
ALTERNATOR .....	6-1	OPERATOR CAB .....	1-1, 5-1
ALTERNATOR BELT ADJUSTMENT (453) .....	1-1	OPERATOR CAB GAS CYLINDER .....	5-1
ASSEMBLY OF THE ENGINE .....	7B-1	OPERATOR SEAT .....	5-1
AUXILIARY CONTROL LOCKBOLT .....	1-1		
AXLE HUB .....	4-1	PARKING BRAKE PEDAL .....	4-1
AXLE SEAL .....	4-1	PARKING BRAKE DISC .....	4-1
AXLE, BEARINGS AND SPROCKET .....	4-1	PEDAL INTERLOCK LINKAGE .....	2-1
		PIVOT PINS .....	1-1
BATTERY .....	6-1		
BICS™ SYSTEM CONTROLLER .....	8-1	RADIATOR .....	7B-1
BOBCAT INTERLOCK .....		REAR DOOR .....	5-1
CONTROL SYSTEM (BICS™) .....	8-1	REAR LIGHTS (OPTIONAL) .....	6-1
BOB-TACH .....	1-1, 5-1	REAR WINDOW .....	5-1
		REMOTE START SWITCH .....	1-1
CARBURETOR AND GOVERNOR .....	7A-3	REPAIRING THE ENGINE .....	7B-1
CHAINCASE COVERS .....	4-1		
CHAINCASE FLUID .....	4-1	SEAT BAR .....	5-1
CONTROL PEDALS .....	2-1	SEAT BAR RESTRAINT SYSTEM .....	1-1
CONTROL SHIELD AND .....		SEAT BAR SENSOR .....	8-1
STEERING LEVER PANELS .....	3-1	SEAT SENSOR .....	8-1
CYLINDER HEAD .....	7B-1	SERVICE SCHEDULE .....	1-1
		SPARK ARRESTOR MUFFLER .....	1-1
DECIMAL & MILLIMETER EQUIVALENTS .....	9-1	STANDARD TORQUE SPECIFICATIONS .....	
DRIVE BELT .....	3-1	FOR BOLTS .....	9-1
DRIVE CHAIN .....	4-1	STARTER .....	6-1
		STEERING LEVERS .....	3-1
ELECTRICAL SYSTEM .....	1-1	STEERING LINKAGE .....	3-1
ELECTRICAL SYSTEM INFORMATION .....	6-1		
ENGINE .....	7A-3, 7B-1	TENSION PULLEY AND SPRING .....	3-1
ENGINE ASSEMBLY .....	7A-3	TILT CYLINDER .....	2-1
ENGINE COOLING SYSTEM .....	1-1	TIRE MAINTENANCE .....	1-1
ENGINE DISASSEMBLY .....	7A-3	TOWING THE LOADER .....	1-1
ENGINE LUBRICATION SYSTEM .....	1-1	TRACTION LOCK .....	8-1
ENGINE SPECIFICATIONS .....	9-1	TRANSPORTING THE LOADER .....	1-1
ENGINE SPEED CONTROL .....	7B-1	TROUBLESHOOTING .....	2-1, 3-1, 6-1, 7A-3, 7B-1
FAN .....	7B-1	U.S. TO METRIC CONVERSION .....	9-1
FINAL DRIVE TRANSMISSION (CHAINCASE) .....	1-1		
FLYWHEEL .....	7A-3		
FRONT LIGHTS (OPTIONAL) .....	6-1		
FUEL SYSTEM .....	1-1, 7B-1		
FUEL TANK .....	5-1		
GLOSSARY OF HYDRAULIC SYMBOLS .....	9-1		
HYDRAULIC CONTROL VALVE .....	2-1		
HYDRAULIC CYLINDERS .....	2-1		
HYDRAULIC FILTER BLOCK .....	3-1		
HYDRAULIC/HYDROSTATIC .....			
FLUID SPECIFICATIONS .....	9-1		
HYDRAULIC/HYDROSTATIC SYSTEM .....	1-1		
HYDRAULIC PUMP .....	2-1		
HYDRAULIC RESERVOIR .....	2-1		
HYDRAULIC SYSTEM INFORMATION .....	2-1		
HYDROSTATIC MOTOR .....	3-1		
HYDROSTATIC PUMP .....	3-1		
HYDROSTATIC SYSTEM INFORMATION .....	3-1		
IGNITION SYSTEM .....	7A-3		
INSTRUMENT PANEL .....	6-1		
LIFT ARM BY-PASS BLOCK .....	2-1		
LIFT ARM SUPPORT DEVICE .....	1-1		
LIFT ARMS .....	5-1		
LIFT CYLINDER(S) .....	2-1		
LIFT AND TILT LOCK BY-PASS VALVE .....	8-1		
LIFTING AND BLOCKING THE LOADER .....	1-1		
LIFTING THE LOADER .....	1-1		
LOADER SPECIFICATIONS .....	9-1		
LUBRICATING THE LOADER .....	1-1		

Dealer Copy Not for Resale



Thank you very much  
for your reading.  
Please click here  
to get more information.